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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/271,011	03/17/1999	MOHAN V. KALKUNTE	82771.P270C2	3401

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EXAMINER

DUONG, FRANK

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 02/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/271,011	KALKUNTE ET AL.
	Examiner Frank Duong	Art Unit 2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 26 November 2002.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

1. This Office Action is a response to the amendment dated 11/26/2002. Claims 1-20 are pending in the application.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 09/271,008. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter of claims 1-20 of the instant application encompasses the claimed invention of claims 1-10 of the above copending patent application for the same rationales stated in the Office Action dated 07/30/2002.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that

copending application since the referenced copending application and the instant application are claiming common subject matter. Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. 09/131,141. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter of claims 1-20 of the instant application is common and encompasses the claimed invention of claims 1-22 of the above copending patent application for the same rationales stated in the Office Action dated 07/30/2002.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter. Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simmons in view of Frazier.

Regarding **claim 1**, in accordance to '028, Figures 2-4, col. 6, line 5 to col. 10, line 12, Simmons discloses a flow control method (corresponding to "method for preserving frame order of a plurality of frames" in a half duplex Ethernet network (Figure 2) (corresponding to "plurality of communication links"), the method comprising, among other things: assigning a plurality of pointer value to a corresponding plurality of records in a pointer value buffer associated with each of the virtual links, the assignment of the plurality of pointer values based, at least in part, on a relative order in which data frames are transmitted on each of the virtual links (*note: col. 8, lines 21-43, Simmons discloses rules checker 42 or 68 places the port vector and the corresponding frame pointer into the port vector FIFO 63. Then, the port vector FIFO 63 assigns the frame pointer to the appropriate destination port(s) by placing the frame pointer into the top of the appropriate output queue 67 (corresponding to claimed "based on a relative order in which the data frames are transmitted on each of the virtual links" because the frame pointer is placed into the top of the output queue 67).* Note that Simmons, in accordance to col. 6, lines 50-56, also discloses one of the advantages of using external rule

checker 44 is increasing the capacity of the network. Moreover, Simmons, in according to Figure 2A, also shows signal RX\_DVB, as known in the Gigabit Ethernet world is Received Data Valid signal, when enable causes MII 28 in the interface 12 to receive data on RXDB.

Simmons fails to explicitly disclose the step of receiving up to a plurality of indications denoting commencement of frame transmission on each of the virtual links. However, the step of receiving up to a plurality of indications denoting the start of frame transmission on each of the virtual links is well known and discloses by Frazier.

In according to '559, Figures 1, 3C-3D and 6, the abstract and col. 6, lines 6-9, col. 9, line 31 to col. 10, line 24, and col. 13, lines 39-42, Frazier discloses a flow control method in a full duplex Ethernet network comprising, among other steps, the step of receiving up to a plurality of indications denoting the start of frame transmission on each of the virtual links (*note: '559, col. 6, lines 6-9, Frazier discloses when RX\_DV is asserted on the MII, MAC receive processing logic accepts and process data from the physical layer, and then passes the processed data to the logical link control layer and col. 13, lines 39-42, Frazier discloses the receive carrier sense variable may be derived directly form the MII signal RX\_DV, and is used to indicate incoming bits. Thus, the recitation thereat is corresponding to the claimed step of receiving.*)

It would have been obvious to a skilled artisan at the time of the invention to implement Frazier's teaching into Simmons' method to arrive the claimed invention with a motivation of providing a flow control mechanism for a full-duplex Ethernet network as well as increasing the network capacity.

Regarding **claim 2**, in addition to features called for in base claim 1 (see *rationales pertaining the rejection of base claim 1 discussed above*), the claim further calls for receiving the data frames transmitted on each of the plurality of virtual links in a common receive buffer (see '028, *element 34 and the description at col. 6, lines 15-20 and col. 10, lines 13-22*). Thus, Simmons in view of Frazier discloses the claimed invention.

Regarding **claim 3**, in addition to features called for in base claim 2 (see *rationales pertaining the rejection of base claim 2 discussed above*), the claim further calls for reading the received frames from the common receive buffer (34) based, at least in part, on the pointer value assigned in each of the pointer value buffers ('see '028, col. 8, lines 34-43). Thus, Simmons in view of Frazier discloses the claimed invention.

Regarding **claim 4**, in addition to features called for in base claim 3 (see *rationales pertaining the rejection of base claim 3 discussed above*), the claim further calls for wherein frames are promoted from the received buffer with priority given to pointer value order in higher transmission rate pointer value buffers (see '028, col. 8, lines 21-43 wherein Simmons discloses the port vector FIFO 63 assigns the frame pointer to the destination port by placing the frame pointer into the top of the appropriate output queue 67, queuing the transmission of the data frame. Thus, Simmons discloses frames are promoted from the received buffer (34) with priority given to pointer value order. At col. 10, lines 33-40, Simmons further discloses the base address for the entire memory 34 is programmable. In according to Fig. 1, Simmons shows the integrated

multiport switch 12 serves 24 10Mb/s networks stations 14 and 2 100Mb/s networks stations 16. Thus, It is obvious to those skilled in the art to associated priority given to pointer value order in higher transmission rate pointer value buffers to better server the network station users with the higher transmission rate by programming the base addresses in the memory 34). Thus, Simmons in view of Frazier discloses the claimed invention.

Regarding **claim 5**, in addition to features called for in base claim 1 (see *rationales pertaining the rejection of base claim 1 discussed above*), the claim further calls for wherein a plurality of pointer value buffers are used to store pointer values denoting the commencement of transmission of frames on a corresponding plurality of virtual links supporting a particular transmission speed (see '028, Fig. 7B, col. 13, line 29 to col. 14, line 28). Thus, Simmons in view of Frazier discloses the claimed invention.

Regarding **claim 6**, in addition to features called for in base claim 1 (see *rationales pertaining the rejection of base claim 1 discussed above*), the claim further calls for wherein frames are promoted in pointer value order with priority given pointer values stored in the pointer value buffers associated with higher transmission rate virtual links (see '028, col. 8, lines 21-43 wherein Simmons discloses the port vector FIFO 63 assigns the frame pointer to the destination port by placing the frame pointer into the top of the appropriate output queue 67, queuing the transmission of the data frame. Thus, Simmons discloses frames are promoted in pointer value order with priority given pointer values stored in the pointer value buffers. At col. 10, lines 33-40, Simmons further discloses the base address for the entire memory 34 is programmable.

In according to Fig. 1, Simmons shows the integrated multiport switch 12 serves 24 10Mb/s networks stations 14 and 2 100Mb/s networks stations 16. Thus, It is obvious to those skilled in the art to associated priority given to pointer value order in higher transmission rate pointer value buffers to better server the network station users with the higher transmission rate by programming the base addresses in the memory 34). Thus, Simmons in view of Frazier discloses the claimed invention.

Regarding **claim 7**, it is known in the Ethernet world that signals to include the indication (RX\_DV) between the PHY and MAC are analog. Thus, RX\_DV, the indication, is an analog indication.

Regarding **claim 8**, see '028, Fig. 2A, RX\_DVB or '559, Fig. 5, RX\_DV.

Regarding **claim 9**, see '028, Figs. 4-5.

Regarding **claims 10-20**, the claims are rejected by the same rationales applied to claims 1-9.

### ***Response to Arguments***

5. Applicant's arguments filed 11/26/2002 have been fully considered but they are not persuasive. Applicants' arguments will be addressed hereinbelow in the order in which they appear in the response dated 11/26/2002.

In the Remarks of the outstanding response, on page 6, Examiner notes that Applicants have acknowledged the provisional obvious-type double patenting rejection of the pending claims, but declined to file a terminal disclaimer at this point in time.

Applicants are reminded that a mere acknowledgement cannot overcome such rejection, but a timely filed terminal disclaimer will.

In the Remarks of the outstanding response, on page 8 continues to page 9, Applicants alleges "*Simmons does not discloses or suggest the assignment of the plurality of pointer values based, at least in part, on the relative order in which data frames are transmitted on each of the virtual links*".

In response Examiner respectfully disagrees and would like to direct Applicants' attention back at Simmons reference. Simmons clearly discloses, at col. 7, lines 47-49, "*Frames are received by the internal MAC engines 60, 62, or 36, and placed in the corresponding receive FIFO 64*"; lines 58-62, "the buffer manager 65 obtains a free frame pointer from the free buffer pool 104. The free frame pointer specifies a location in external memory 34 available for storing the data frame currently stored in the receive FIFO 64"; col. 8, lines 1-43, "*The buffer manager 65 also sends the free frame pointer to the rules checker 42 or 68 to enable the appropriate rules checker to process the header information while maintaining the storage location of the data frame ... the assigned frame pointer reaches the bottom of the output queue 67 after passing through the output queue 67 ... MAC layer*". Contradistinction to the Applicants' allegation, Simmons does assign the pointer values based on the relative order in which data frames are transmitted on each of the virtual links, even Simmons uses FIFO.

As for the allegations of "*frames which were transmitted later but were completely received or arrived first*" or "*frames which arrive first are promoted before frames which, even if completed first, arrived later*", stated in the Remarks on page 9,

Examiner finds no such language in the claim. Perhaps, Applicants should incorporate those limitations in the claims in an upcoming response to better claimed the invention; otherwise, the allegations are baseless.

In the Remarks of the outstanding response, pages 8-10, Examiner notes that Applicants attack the reference individually in a 103 rejection. Applicants cannot show non-obviousness by attacking references individually where, as here the rejections are based on combination of references. *In re Keller*, 208 USPQ 871 (CCPA 1981).

Examiner believes an earnest attempt has been made in addressing all of the Applicants' arguments.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is (703) 308-5428. The examiner can normally be reached on 7:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

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A handwritten signature in black ink, appearing to read "frank duong".

Frank Duong  
January 27, 2003